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JOHN ARTHUR ON JUST HOW TO MINE

When a man makes a success in any field of human endeavor, the world is ready to listen to what he says on the subject of his business or profession; frequently when he deserves no especial credit, for the world at large is not endowed with the rare power of intelligent discrimination. But in order to take a success of a mining proposition; which in this connection means to take the gold out of the ground and turn it to refined bullion at a profit, where others have failed; that requires a profound knowledge of the business technically, experience and above all things else, common sense. The opinions of a man who has accomplished this, therefore, are entitled to consideration, and for these reasons The Miner deems worthy of publication a few remarks which John Arthur made to its representative before leaving for the Imperial this forenoon. The all-absorbing topic of conversation, cogitation, "rag chewing," in this region was the subject before the house, when John Arthur, who has studied mining conditions, especially with reference to scientific and practical ore treatment, in eastern Oregon for a decade, chipped in with these observations:

"I know of at least forty properties in districts contiguous to Sumpter, now unproductive, that can be worked at a profit of from \$2,000 to \$6,000 a month. Some of them are capitalized at a few million dollars and at present they can't be made to pay dividends on any such amount. Some of them have reduction plants that cost any here between \$10,000 and \$40,000, that, as they stand today, are not worth two bits. Others have sinking plants that cost from \$10,000 to \$150,000, that do not justify such expenditure. Most of them have wasted many thousands of dollars in driving long cross cut tunnels, out of which no ore is coming.

"My theory is that what is necessary in this, as, in fact, all mining districts, is to get the gold out of the ground as quickly as possible and with the least possible expenditure of money. To be more specific, if I owned an undeveloped claim on which there was the surface indication of a good ore shoot, I would sink right there, never letting go

of the ore. A cheap whim with cayuse power would go down conveniently fifty or seventy-five feet, if too much water was not encountered. Then I would put in a steam sinking plant with a capacity of three or four hundred feet, which would not cost over \$1,500. In this country a claim is either proven worthless or valuable at a depth of 400 feet, if the latter, it can stand all the expense necessary for more perfect or powerful machinery. When I opened up a body of ore, I would pay some man who understands ore treatment \$500 to tell me what sort of a plant I needed to extract the values instead of paying \$20,000 for a plant with which to experiment. I would then put in a small plant, at a cost of from \$3,000 to \$5,000, and begin as quick as the Lord would let me to get the gold and silver transferred to my bank account.

"These, of course, are the preliminary steps toward making a mine. When you have accomplished that, you can throw away this cheap machinery—at a big profit, too—and then erect what the expert who sells the plant will call a 'model mill.'

"Of course, what this country needs most at the present time is transportation facilities, to bring ores and concentrates from the mines to the smelter. And in building that road, I would pursue the same policy as I have just outlined in opening up a mine; build it as cheaply as possible, buy second hand rails and equipment, get hold of an old locomotive that some other road has thrown away, that will make ten miles an hour down grade and haul 50 to 75 tons. Of course, it wouldn't be a rapid transit proposition; but I would like to take the contract to construct such a road to Cableville for \$30,000 and it would be a dividend payer too. Even during these dull times, the people of Sumpter could do that thing themselves, if they would—but they won't.

"With this little railroad, hauling ore to the smelter for one to two and a half dollars a ton, I could lease and operate at a profit a dozen idle properties along its line; and force the smelter here to double its capacity in ninety days, in order to handle ore from Cracker Creek and Cable Cove districts alone.

Within ten days after such rates were established I could myself add 40 tons a day to what the smelter is now receiving. We are paying \$3.50 a ton for wagon haul. Two dollars a ton profit on ore is itself worth while, and we could then all get rich mining, concentrating and smelting fifteen dollar rock."

Transportation Enterprise That Failed.

The old steam traction engine, with which an attempt was made about five years ago by F. M. Christian, of Silver Lake, to haul freight from the railroad to his store in Lake county, has been sold to the lumber firm of Reed & Steild, who will use the engine in hauling logs to their mill at Lytle. The machine in question will be remembered by many residents of this city, who are familiar with the efforts made by Mr. Christian in 1898 to revolutionize central Oregon transportation methods. He purchased the engine in Portland and took it to The Dalles, where it was coupled onto several heavily loaded freight wagons and started on its journey of over 200 miles to its destination. But a series of mishaps and breakdowns and the fact that the road over which it traveled were in anything but orderly shape, made the trip a disastrous one from start to finish, and the time occupied covered a period of several months. Besides the delays ensuing from various causes, the trip proved an expensive one, and with the engine's arrival at Silver Lake with a portion of its original load of merchandise, it was placed in dry dock, where it has since remained. The engine was steamed up last week for the first time in six years and run to Lytle, where it is said it will displace about 30 horses in the work which it will be required to do. — Crook County Journal.

LESLIE'S WEEKLY ON THE STANDARD

Ernest C. Rowe, in a recent issue of Leslie's Weekly, gives an interesting description of the cobalt property of the Standard Consolidated Mines company in the Quartzburg district. Mr. Rowe says in part:

Out in eastern Oregon, in what is known as the Quartzburg district, is situated the most remarkable mine in all America, and in a quantitative way, in all the world. Rather than qualify it as a mine, one might say it is a mountain of ores carrying high values in gold, copper and cobalt. Nature secreted within America's rocky vaults all the metals ever found by man, and most of the precious metals are well spread. But up to the present, cobalt has been discovered nowhere on this continent

in quantities more than a trace here and there, save in just this one spot on Dixie creek, a tributary of the great John Day river, and about a hundred miles south and a hundred miles of east Oregon's northern and eastern boundaries. And the mystery of it is that where only suggestions of cobalt have been handed out to other states, there is undeniably enough cobalt in this deposit, to control the world's market.

The history of the discovery of this vast cobalt deposit is exceedingly interesting. About the year 1862 gold was discovered in eastern Oregon by one Griffin, a hardy pioneer from Missouri. A motley stream of adventurous human riffraff soon drifted theltherward, magnetized by the stories of the fabulous golden riches awaiting the placer miners. With this stream of adventurers came one Juneau — Joe Juneau — a French Canadian voyager of no mean birth, and possessing more than an average education. It would seem that Juneau, among his varied accomplishments, possessed a limited knowledge of quartz mining and knew something of metallurgy, for he discovered this very body of cobalt, as the history and folk lore of this region prove, and he subsequently mined and shipped to France much of the ore.

When I visited this section recently I stood on the brink of Juneau shaft, 700 feet above the creek, where its first owner, with his crude instruments and cruder knowledge, mined this precious metal. The rock was hard and grub scarce, and as the remoteness of the region compelled ruinous transportation cost, Juneau slowly sickened of his task and abandoned the mine, drifting by zigzag course into southern Alaska, where he founded the city which now bears his name. Juneau died in Dawson City three years ago, and last summer public spirited citizens of Juneau caused his remains to be brought to the latter town for burial, and on his tombstone reference is made to his discovery in Oregon.

The Standard Consolidated Mines company, the present owner of the mine, has proceeded rapidly in opening up the vast cobalt-gold-copper ore bodies, but with caution when it comes to putting out money for machinery. Knowing well the difficulties in commercially saving cobalt from this rich auriferous deposit, and the peculiarities of cobalt being but little known outside the chemical laboratories of Europe, American brains were called on to solve the problem of commercially reducing these ores, and finally a famous metallurgical chemist, Professor H. H. Nicholson, has demonstrated a process which reduces the ores into their constituent parts, saving 90 per cent of the cobalt, gold and copper values—a greater percentage than was saved by Liebig, the well known chemist of Paris.